

Notice of Allowability

Application No.

10/772,910

Examiner

James J. Leybourne

Applicant(s)

KLEINSCHMIDT, JUERGEN

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☒ The drawings filed on 05 February 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 2/5/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-21 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Regarding independent claim 1, the prior art fails to disclose or make obvious a capillary mixer that delivers a mixture of two solutions to an ion source of a mass spectrometer, wherein the mixer comprises: a pair of concentric capillaries consisting of: an outer capillary and an inner capillary within the outer capillary, thereby forming an annular intercapillary space between the outer and inner capillary, wherein the inner capillary is slidably sealed to the outer capillary at or near the proximal end of the outer capillary and is movable back and forth within the outer capillary thus forming an adjustable volume reaction chamber for two fluids within the annular intercapillary space between the outer and inner capillary.

Claims 2-4 are allowed by virtue of their dependency on claim 1.

Regarding independent claim 5, the prior art fails to disclose or make obvious a mass spectrometer that comprises a capillary mixer as described in claim 1.

Claims 6-11 are allowed by virtue of their dependency on claim 5.

With respect to the independent claim 12, the prior art fails to disclose or make obvious a method of using the mass spectrometer as described in claim 9.

Claims 13-21 are allowed by virtue of their dependency on claim 12.

The main feature that separates the apparatus and method apart from prior art is providing a mixer for two fluids supplied to an electrospray source of a mass spectrometer wherein the volume of the mixing section can be adjusted while the mass spectrometer is being used to analyze samples.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance"

Relevant Prior Art

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to mixing fluids supplied to an ion source.

USPN 6166379 to Montaser et al.

USPN 6274867 to Wells et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James J. Leybourne whose telephone


number is (571) 272-2478. The examiner can normally be reached on M-F 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 5, 2004

JJL


NIKITA WELLS
PRIMARY EXAMINER 11/09/04